

REMARKS

This is a timely request for continued examination (RCE) under Rule 114. A final office action was issued Nov. 15, 2005. A fee of \$395 is included for a small entity.

In response to the examiner's question, the applicant notes that the information supplied in the previous amendment concerning co-pending applications was merely to bring them to the examiner's attention.

In the current final office action, claims 51-56 and 62-67 were rejected under 35 U.S.C. 112, 1st paragraph. Claims 56-50 and 57-61 were rejected under 35 U.S.C. 102(b) as being anticipated by Klemm et al. Claims 46-50, 52, 55, 57-61, 63 and 66 were rejected under 35 U.S.C. 102(b) as being anticipated by Shjintoo Fine KK. Claims 51, 53-54, 56, 62, 64-65 were rejected under 35 U.S.C. 103(a) as being unpatentable over Shinto Fine KK. Claims 40-42 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting.

Rejections under 35 U.S.C. 112

Claims 51-56 and 62-67 were rejected as containing new matter. As to claims 55 and 66, they recite water. Water extendable MWF systems is discussed on Page 2, lines 5-6 of the specification. As to claims 56 and 67, they recite a base. The applicant clearly states that MWF bases are alkaline on page 3, line 2. As to claims 51-54 and 62-65 (surfactant, corrosion inhibitor, fatty acid and oil), it is well known by persons of ordinary skill in the art that surfactants and oils are very commonly used for MWFs, in fact, most MWFs contain water soluble oils. The oils are made water soluble by surfactants. In Example 1, the applicant takes the dioleate produced and incorporates it into a standard MWF base (See page 13 lines 2-3). A person skilled in the art to which the invention pertains, i.e., MWFs, would know that the standard MWF base will most certainly contain oils and surfactants. Such a person will also know that such a base many times contains corrosion inhibitors. As for a fatty acid, the applicant uses oleic acid in Example 1 to form an ester; however, it would be expected by a person skilled in the art to have excess acid also entering the MWF.

Also, as to Example 1, only a small amount of sulfuric acid is used as a catalyst (2 grams vs. 1128 grams acid and 400 grams BNPD). The resulting ester will not be very acidic. Since it is known in the art that all MWFs must be buffered in the alkaline range, the standard MWF referred to in Example 1 will contain a buffer (usually an amine) that will surely neutralize the small amount of remaining sulfuric acid.

For these reasons, the applicant respectfully traverses the examiner's rejections under 35 U.S.C. 112, 1st paragraph.

As to the rejection under 35 U.S.C. 112, 2nd paragraph, the applicant has amended independent claims 46 and 57 to use the transitional language suggested by the examiner.

Double Patenting Rejection

The examiner rejected claims 40-42 under the doctrine of obviousness double patenting; however, claims 40-42 were cancelled in the previous amendment. On page 2, of the current office action, the examiner states: "Claims 46-67 are pending". Thus these claims are no longer pending.

Rejections under 35 U.S.C. 102 and 35 U.S.C. 103

Claims 46-50 and 57-61 were rejected as being anticipated by Klemm et al. (Journal of Chromatography, Vol. 438. No. 1, pp. 122-125), and claims 46-50, 52, 55, 57-61, 63 and 66 are rejected as being anticipated by Shinto Fine KK (JP 2000053502 A). Claims 51, 53-54, 56, 62, 64-65 and 67 are rejected as being unpatentable over Shinto Fine KK.

Concerning the Klemm reference: All of the esters cited in Klemm's table are saturated. Therefore, they cannot anticipate the claims as amended to contain at least one non-saturated tail. Also the single sterate mentioned by the examiner from the Klemm table ($\text{H}_{35}\text{C}_{17}\text{-O-CH-(NO}_2\text{Br)-CH-O-C}_{17}\text{H}_{35}$) is a non-waxy, very hard solid at room temperature. It's melting point has been experimentally determined by the applicant to be greater than 40 degrees C. It will not dissolve in a metal working fluid base at room temperature and is therefore totally unusable as or in a metal working fluid.

Concerning the Shinto Fine KK reference: While this reference mentions aryl esters, it fails to give any example of using an ester with an unsaturated tail that is liquid at room temperature in an MWF base to make a metal working fluid. In particular, the passing reference in

Shinto Fine KK is not sufficient to anticipate the applicant's claims, especially to particular species such as oleates.

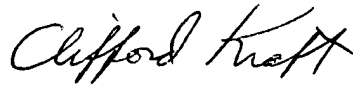
As to the Shinto Fine KK reference in general: This reference teaches industrial water. There is a single passing reference in one word to metal working fluids. Neither the word "metal" nor the words "metal working fluid" ever appear again. Also the Japanese character that was machine-translated to fluid can also translate as oil. It is well known in the art of metal working fluids that there are major differences between metal working fluids and industrial water. Industrial water generally refers to cooling tower water, waste water, and in the case of Shinto Fine KK, water used in the paper and pulp industries. The emphasis in industrial water is the avoidance of bio-materials in the water, especially fungus. The fact that Shinto Fine KK merely mentions metal working fluids in a detailed discussion of industrial water does create a teaching of metal working fluids strong enough to reject the applicant's claims under 35 U.S.C. 102. It is known in the art of industrial water to add biocide agents to industrial water to prevent growth. Biocides are exactly what the applicant's invention attempts to avoid with metal

working fluids since they are strictly additives, and are usually dangerous to handle. However, the addition of biocides is exactly what Shinto Fine KK teaches: An A component (the ester) is always added to a B component which is a biocide (See Shinto Fine KK Par. 0007: "The nitro bromine compound and dibromo (component B) cyanoacetamide..). Shinto Fine KK does not give a single example, nor discusses using the ester ALONE in a metal working fluid to prevent bio-degradation or to kill biological material. The cyano- compounds and all other component B materials taught by Shinto Fine KK are very hazardous to handle

In the applicant's invention, the bio-resistant ester can actually take the place of the oil in the MWF base and, as such, can partially or totally become the MWF, not simply an additive. Additionally, the ester is not poisonous or dangerous to handle. The applicant respectfully feels that there is no teaching in Shinto Fine KK strong enough to anticipate the applicant's claimed invention or to render it obvious to a person of ordinary skill in the art (a person of ordinary skill in the metalworking fluid arts).

For these reasons, the applicant believes that the claims as here-presented are allowable. The examiner is respectfully requested to place the case in condition for allowance at his earliest convenience.

Respectfully submitted



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